Topographically Speaking

"Rails of Yesterday"

Rolla Frisco Depot--October 10, 1941

MARCH-APRIL 1981 — GEOLOGICAL SURVEY, NATIONAL MAPPING DIVISION, 1400 Independence Road, Rolla, Missouri 65401 — Vol. 4 No. 4

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G. H. Raymond . . . . . Sports
L. A. Sanchez . . . . . Typist
C. J. Forbes . . . . . Photographer
J. J. Wynn . . . . . Illustrator

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FROM THE OFFICE OF THE CENTER CHIEF

Highlights since last issue of Topographically Speaking:

Increased Productivity.--MCMC 7.5-minute map production has increased during the first quarter of FY 1981. Improved rates for major phases--advanced field completion, stereocompilation, and scribing--are especially noticeable. Commendations to all responsible for this increased productivity. MCMC is behind schedule in meeting goals for FY 1981 photorevision.

Budget Outlook.--FY 1982 budget outlook for National Mapping Division is good. No planned funding reductions for NMD.

Hiring Freeze.--Hiring freeze remains. Indications are that MCMC will soon receive a new personnel ceiling--probably lower than current ceiling of 327 full-time permanents. MCMC's current strength is 312. Anticipate authority will be given soon to hire up to new ceiling if ceiling is higher than current strength. We now have authority to hire temporary field assistants. Hiring freeze has had the most impact on the Branch of Plans and Production and some field projects. Some positions remain vacant. Thanks to those employees who are assuming additional duties until the positions can be filled.

National Mapping Manager's Consultation (formerly TDSC).--The next NMMC was scheduled to be held at MCMC in May. In order to conserve travel funds, the May consultation will be held in Reston. November conference may be scheduled for MCMC.

Reorganization Plans.--Plans for reorganization of MCMC are nearing completion. While at the National Center recently, I met with Southard, Mullen, and Miles to discuss MCMC reorganization plans. Since the meeting, MCMC Reorganization Task Force has been finalizing plans. Updated MCMC proposal is being sent to the Division for Division and Bureau approval.

Affirmative Action Program.--On this subject, the following was sent to all Mapping Center and Staff offices from the Chief of the Division:

> "The enclosed report describes the Geological Survey's accomplishments under the Affirmative Action Program. The gains in the employment of women and minorities are significant. Your continued support and initiative in furthering equal opportunity within the National Mapping Division are critical to extending the trends illustrated in this report.
>
> "I appreciate your position direction to the Equal Opportunity Program within your organization and I'm confident we will improve upon our affirmative action gains."

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CARTOGRAPHER DEVELOPMENT PROGRAM

by Merle E. Southern

In line with a recent National Mapping Division policy decision concerning the procedure for converting GS-11 Cartographic Technicians to Cartographer positions, the first MCMC employees selected to enter the Cartographer Development Program at the GS-11 level have been announced. Those employees selected were Homer Briggeman, Jerry French, Norman Ragan, Everette Reppond, and Jack Turner.

Individual development plans have been designed for each to increase their experience, knowledge, and skills needed to meet the professional demands of the National Mapping Program. In addition to the

various operational phases in which each will receive training, all either have completed or will be required to complete a minimum of 8 semester hours of college-level mathematics and 3 semester hours of computer science courses. Also, technical reports covering the training received while in the Cartographer Development Program are required.

Homer Briggeman graduated from Kansas State with a Master of Science degree in Geology. Before beginning his career with the Survey, he had previous field surveying experience with Soil Conservation Service. His entire career with the Survey has been in the Branch of Photogrammetry.

Jerry French graduated from McNeese State, in Louisiana, with a Bachelor of Science degree in Geology. His entire career with the Survey has been in the Branch of Photogrammetry.

Norman Ragan attended the University of Missouri-Rolla, where he studied Mechanical Engineering. His entire career with the Survey has been in the Branch of Photogrammetry.

Everette Reppond graduated from Northeast Louisiana State with a Bachelor of Science degree in Geology. Before beginning work at MCMC, he had about 2 years of service with the Army Map Service and 2 years with WMC. His career with MCMC has been almost entirely in the Branch of Photogrammetry, with short assignments in the Branch of Field Surveys.

Jack Turner graduated from Southern Illinois University with a Bachelor of Arts degree in Geology. During his career with the Survey, he has worked in the Branch of Field Surveys for about 10 years, Photogrammetry for almost 11 years, and Cartography for about 6 years.

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MICRO-FILMING SYSTEM *by Allan Kohrmann*

A new micro-filming system has recently been installed at MCMC. This system consists of a Kodak micro-film camera, film processor, and viewer-inserter, as well as a viewer enlarger-printer produced by CAPS Ltd. of England. This equipment will be used to micro-film, view, and reproduce data such as boundary plats, control books, correction file copies, and aerotriangulation diagrams that are filed at the Center. This will result in a reduction in the amount of storage space needed to file data, and it will also provide a more accurate record of the information on hand.

The Kodak micro-film camera, processor, and viewer-inserter are located in the photolab and are operated by the personnel of this Section. The camera uses either 16mm or 35mm film, with the size to be used being determined by the type of data to be copied. The 16mm film is used primarily for copying large amounts of similar sized, printed material, such as control books. Large boundary plats or 7½-minute quadrangle maps are best copied using the 35mm film. After copying the data and developing the micro-film the imagery is furnished to the user either in roll form or as individual exposures which are placed in viewing cards using the viewer-inserter.

The CAPS viewer enlarger-printer is located in Field Surveys Inspection Section and it can be used to view the micro-film while in roll form or when mounted in the viewing cards. It will be used primarily for viewing, checking, and printing boundary information for mapping projects. This viewer utilizes a lens and mirror assembly to produce

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a 7 to 24 power magnification capability, which permits viewing and printing of the micro-filmed boundary data at a wide variety of scales. This enables the user to view the micro-film image, enlarge or reduce it to fit the scale of the map being worked, and produce a paper print of the image if it is required.

This equipment will be used to film a wide variety of information at this Center. At the present time, boundary information that is on file in FSIS is being filmed, as are control books from the Geodetic Section, and the photographs that the Branch of Photogrammetry is supplying to contractors. Other material that is to be placed on micro-film includes correction and editing file material from the Branch of Cartography, and aerotriangulation diagrams and review sheets from Photogrammetry. This system will provide an excellent means of storing and recalling the large amounts of material currently in files throughout the Center.

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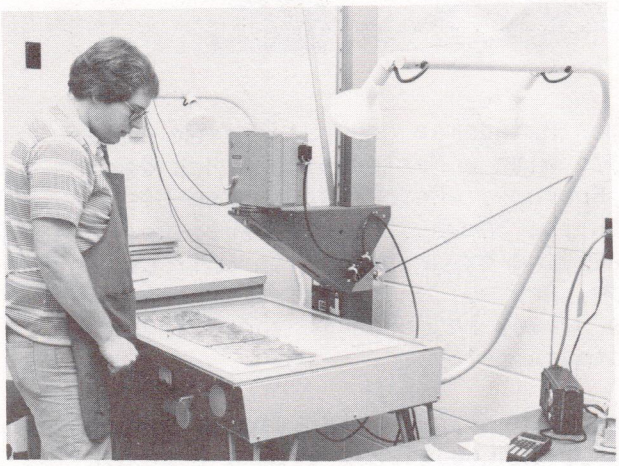
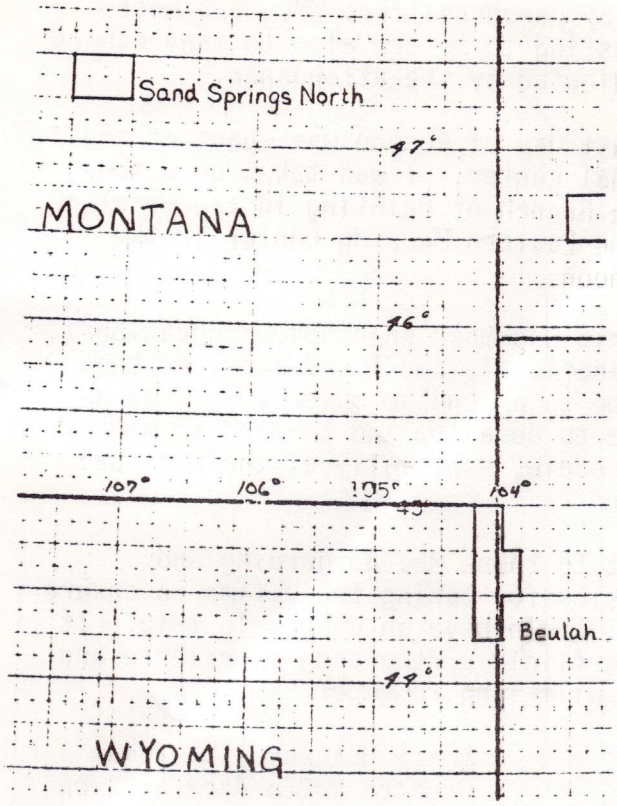


MID-CONTINENT STRETCHES WEST

Two projects outside Mid-Continent's operating region have been authorized and are included in the 1981 summer field program. The Beulah Project, located primarily in Wyoming with areas extending into South Dakota and Montana, encompasses 14, 7½' quadrangles. Of greater significance are the 8, 7½' quads in the Sand Springs North Project located in Montana. Sand Springs North becomes the westernmost 7½' mapping project worked by the Mid-Continent Mapping Center in recent years.



This westward movement can be expected to continue until the country is completely covered by 7½' quads. With approximately 95% of the U.S. covered, the remaining 5% is generally in the western half of the country.

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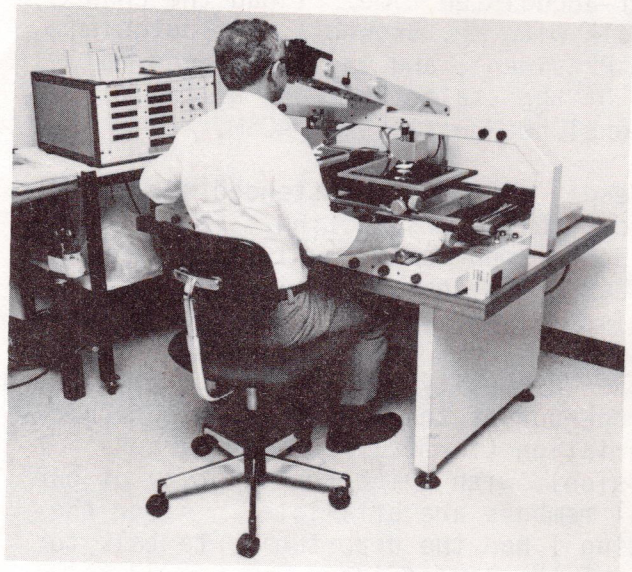
CPM1

by Dwayne Sawyer

A new, innovative addition to the Aero-triangulation Unit is the Swiss-made Kern CPM1--a steroscopic point transfer and measuring instrument. This instrument is used for the optical viewing of a stereoscopic pair of glass diapositives, film negatives or positives; the identification and marking (drilling) of natural and artificial triangulation points; and the digital measurement and recording of the x and y coordinates of these points. A vacuum hold-down system firmly secures the film or glass plates in a flat, stationary position permitting consistent, accurate readings from the plates. The CPM1 is interfaced to an AC-74 Altek digitizer which assigns the "pugged" points an appropriate x and y value. Other features include a zoom magnification range of 5x to 25x. The optical trains have dove prisms whereby the image can be rotated through 360° enabling the operator to "pug" across flight. The drill, which is electrically powered, is capable of drilling a small hole in the emulsion without damaging the film base or glass surface which supports the emulsion. The amount of error of the drilled mark to the reference mark is exceptionally small--less than 5 micrometers. The main advantage of this instrument is the capability of reducing the time required to complete a project--ulimately reducing the overall cost.



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ASP NEWS

by John Kelmelis

Two American Society of Photogrammetry members received awards. They were Dr. Charles R. Kelly of East Central University, Ada, Oklahoma and Mr. John D. Van Horn of MCMC. Both are recipients of the Ford Bartlett Award for membership.

These awards were announced at the 1981 ASP-ACSM Convention in Washington, D.C.

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1981 ACSM-ASP ANNUAL CONVENTION,
WASHINGTON, D.C.

On Sunday, February 22, Mr. Borgerding, Mr. Osick, and I departed Mid-Continent Mapping Center en route to the Annual Convention of ACSM and ASP. The opening ceremonies began at 10 a.m., Monday, at the Washington Hilton in downtown D.C.

Mr. Rupert B. Southard, Chief, National Mapping Division, was the keynote speaker. He presented a very informative address on the future of mapping and earth sciences, detailing the roles of the Geological Survey, other Federal agencies, and the private sector as we strive to upgrade out vast resources of knowledge and technology. The rest of the day was a get-acquainted time. I had the chance to talk with Mr. Brownell, the outgoing ACSM President, and was introduced to some of the staff that work at the national headquarters of ACSM.

Wednesday afternoon I attended the annual Board of Directors meeting. Following an awards ceremony and annual reports, new officers were installed, with Mr. Joel Morrison being elected as our new President. Ms. Judy Olson, Geography Professor at the University of Minnesota, was elected Chairperson of the American Cartographic Association (formerly the Cartography Division), with which the majority of our local members are affiliated. After the meeting I had the opportunity to talk to some of the new officers.

Thursday was probably the most important day for me at the convention. There was a Council of Sections meeting, chaired by Mr. Ira Alexander, President-elect, and Mr. Walter Robillard, Vice-President, ACSM. This meeting was designed for sections such as ours, with one representative from each section in attendance. It was a very informative meeting with each representative having a voice and vote on matters concerning sections, with our views to be reported to the full Board of Direction through Mr. Alexander and Mr. Robillard.

Technical sessions were outstanding and papers were presented on a wide range of subjects. A paper on Mount St. Helens, given by personnel from WMC, was most interesting to me and also to many others as indicated by the attendance.

The last day at Reston was spent at the National Center. I was taken on a tour of the Branch of Printing in the morning and the Eastern Mapping Center in the afternoon.

The trip was most enjoyable, educational, and beneficial, and I was sorry to see it come to an end so quickly. I had a chance to do a lot and to meet so many nice people, especially at the National Center.

I want to thank Mr. Borgerding and Mr. Osick for taking their time to ensure that I would have an enjoyable trip. It was certainly a rewarding experience and one I will long remember.

Marty Moreland, Chairman
Greater Rolla Area Section
ACSM

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ACSM NEWS

ACSM NEWS

On March 24, the Greater Rolla Area Section held a joint meeting with the Rolla Region of ASP at 7 p.m. in the MCMC main conference room.

Mr. Eddie Schwertz, of MCMC's Geographic Investigations Office, was the guest speaker. Eddie gave an excellent presentation on the collapse and draining of Lake Peigneur in Louisiana, and the subsequent damage. His talk was illustrated with slides, maps and "Enviro-Pod" photographs which he took as requested by the Louisiana Geological Survey.

The meeting was well attended, and refreshments were served after the presentation, during an informal discussion of the lake collapse.

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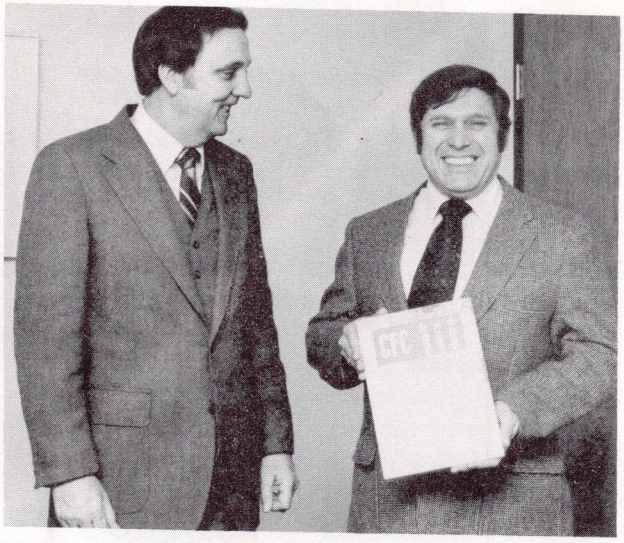
PHOTOGRAMMETRY HONORED

by Olga Detjen



On February 18, Larry Borgerding, Chief, Mid-Continent Mapping Center presented an award to Gene Lortz, Chief, Branch of Photogrammetry, commemorating the fact that the Branch of Photogrammetry had better than 70% participation in the recent United Fund drive.

Mr. Lortz graciously accepted the award on behalf of all members of the Branch and expressed his deep appreciation for their generosity.

For the last few years the United Federal Compaign committee has presented a plaque to each Government agency in the Rolla area attaining 70% or better of employee participation. During the 1980 United Fund drive only the Branch of Photogrammetry achieved this distinction with 76% donating either cash or by payroll deduction.

Jerry Combs deserves special recognition as the 1980 Chairman of the United Federal Campaign. We would also like to express our gratitude to all Federal employees in this area who chose UFC as the way to give to the charity of their choice.

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Here Today--Gone Tomorrow: The Lake Peigneur Incident

By Eddie L. Schwertz

On May 18, 1980, Mount St. Helens erupted with tremendous fury. Everyone thought this was one of the most spectacular events to take place for quite some time. However, as we all know, what goes up; must come down!

On November 20, 1980, about 110 miles west of New Orleans, just north of Delcambre, Louisiana, the local Cajuns celebrated their own version of Mount St. Helens. On placid Lake Peigneur a Texaco crew of a gas drilling rig located about 750 feet from the south shore began normal operations at daybreak. While drilling at about 1300 to 1400 feet, they lost circulation. Shortly thereafter, the rig began to tip, was abandoned by the seven man crew, and eventually disappeared into an ever widening crater on the bottom of the lake.

The rig had punctured one of the abandoned salt mine caverns owned and operated by the Diamond Crystal Salt Company. Luckily, around 8 a.m., an electrician noticed the flooding and alerted the mining crew. By 9:30 all 50 of the miners were evacuated.

By this time the water was beginning to whirl at an increasing rate. As described by a Cajun fisherman caught in the turmoil, "the wind was blowing and everything seemed to go dry on the earth and we were sitting on the mud... It was a twirlpool."

Indeed it was a whirlpool--a whirlpool which by 11 a.m. had caused the ground to quake as gigantic salt pillars dissolved and land slipped away.

By 11:45 a.m. the area was closed to road and air traffic as spectators tried to get a closer view.

By noon all of the water in Lake Peigneur (240 million cubic feet) had drained into the crater. By now, water

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from the Delcambre canal to the south, began to run backwards, approaching speeds at up to 20 knots, into the crater.

By 1 p.m. the crater had grown to 2500 feet in diameter and 100 feet deep. More land broke off and slipped away into the crater. Trees, houses, barges, tugboats, and other debris fell from sight as they entered the crater.

As a last resort to stop the backward flow of the canal, a tugboat crew tried to sink a barge across the canal opening. However, the current was too strong--they had to leap to safety as the barge and the tugboat fell victim to the crater.

At 3:45 p.m. the Iberia Parish Sheriff reported that nine barges, two drilling rigs, five houses, a house trailer, several greenhouses belonging to Live Oak Gardens, and a nursery had been sucked into the crater.

By midnight Thursday, the crater stopped growing. However, one could still hear groans and hisses as the water and salt met on unfriendly ground.

On Friday, the Diamond Crystal Salt Company declared the mine a total loss. Over 200 employees were out of work. The mine which had been in operation since 1922 would no longer produce an average of 100,000 tons of salt per year.

Later that afternoon the Diamond Crystal Salt Company filed suit against Texaco. Texaco representatives said they had obtained a permit from the Corps of Engineers to drill for natural gas at that site and no one from the Salt Company had come forward at the public hearing to object.

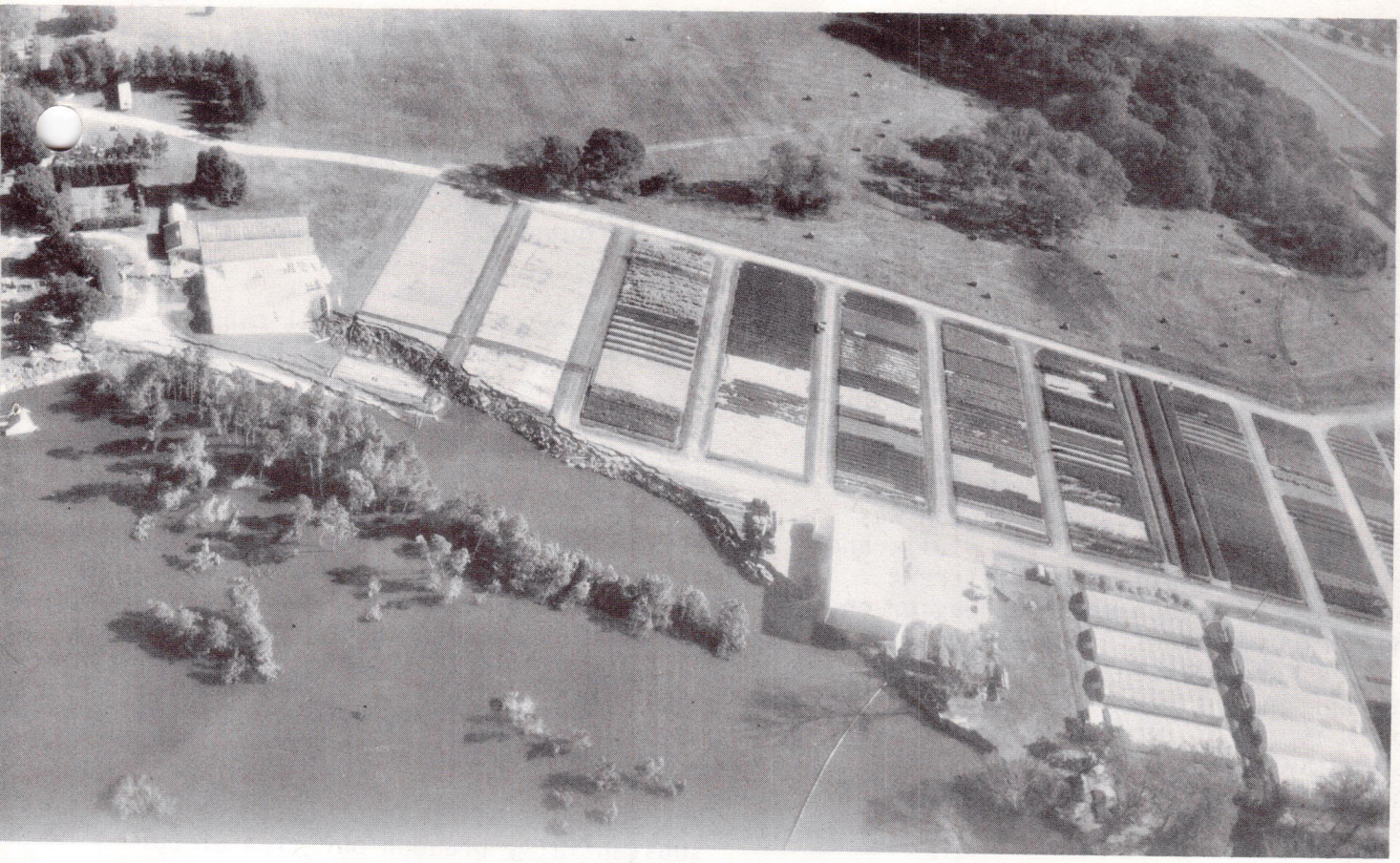
By 7 p.m. Friday, the crater (550 million cubic feet in size) had filled to capacity and Lake Peigneur began to refill.

The following day, Saturday, November 22, 1980, nine barges popped to the surface. By 5 p.m. the lake had filled to its normal tidal level.

The freak accident and the events which followed have been well documented by many aerial photographs, as it occurred, and by a series of seismic monitoring devices a few miles away. No doubt, this will provide scientists with an array of research topics for some time.

The Louisiana Geological Survey, on December 9, 1980, requested the assistance of the Geographic Investigations Office (GIO) at the Mid-Continent Mapping Center to provide large-scale color aerial photography of the surface damage. Following discussions concerning ground resolution requirements, slump directions, weather, and other pertinent flight planning information, GIO completed plans to photograph the Lake Peigneur area on December 18.

Rather than bring GIO's Enviro-pod camera system to Louisiana via commercial air and then renting a Cessna 172 in Louisiana, it was decided that it would



be best to mount the camera system on the aircraft in Rolla and fly to the study site. This meant that the plane would have to leave the day before (Wednesday, Decmeber 17) to photograph the study area around 10 a.m. on December 18.

Plans were to photograph the study area at 5000 feet, 2000 feet, and to sweep down at 500 feet to capture the significance of the surface damage. The picture which accompanies this article was obtained from approximately 500 feet, heading 020°. The damage to the greenhouses, nursery, roadway, and houses is quite visible.

The photographic mission proceeded as planned. Therefore, after returning to Rolla, the GIO staff forwarded the film to the Environmental Protection Agency's Environmental Photographic Interpretation Center (EPIC) in Warrenton, Virginia for processing. EPIC returned the film on January 6, 1981.

On January 7, the GIO staff sent the film to the Louisiana Geological Survey in Baton Rouge, Louisiana. The film is providing much needed post-accident documentation for studying the disruption of the land surface due to the accident and to evaluate the potential for further collapse at the site.

The Louisiana Geological Survey is in the process of completing their initial study of the incident and their mapping of the geomorphic changes which have occurred. They reported that, "the high resolution Enviro-pod photography has been an invaluable resource in our geomorphic mapping."

The staff of GIO explains they were pleased to be of assistance, the only sad note is that GIO couldn't be there to photograph the turmoil on November 20.

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TECHNOLOGY TO LIGHTEN THE BURDEN

by John Kelmelis

The 1981 ASP-ACSM Convention officially began at 10 a.m., at the Washington Hilton Hotel in Washington D.C., on Monday, February 23, 1981. The months of excellent preparation that preceeded the official opening were immediately apparent to even the most casual observer.

The theme of the convention was "Technology to Lighten the Burden." Mr. Rupe Southard's keynote address discussed that topic. The speech was of interest to people in the public and private sectors alike but different parts of the speech weighed heavier on the various interests represented. Mr. Southard pointed out that "part of the burden that is to be lightened by the applications of technology was in itself caused by technology." He cautioned those of us involved with technology to be aware of our responsibilities.

Mr. Southard also pointed out some of the complex advanced technologies that are being researched today such as the airborne terrain profiling system combining a highly sophisticated inertial unit with laser distance measuring. He also outlined mapping applications for our advancing space technology, from the proposed 30 cm focal length camera to be used with high resolution film on the Space Shuttle to new satellite systems beaming back scanned data of more bands and higher resolution than is presently available. The foreign contributions to the application of space technology to mapping were not ignored. The French SPOT system now under construction, with a resolution greater than that of our Landsat system was mentioned. The European Space Agency (ESA) also has plans to build similar systems entitled Coastal Ocean Monitoring Satellite System (COMSS) and Land Applications Satellite Systems (LASS).

Digital cartographic data was emphasized with its many uses for the public and private sectors. The value of computers in dealing with, what Mr. Southard called, "the new cartography that is becoming possible" is that we will be able to deal with past, present, and future. As he pointed out, "the implications will be enormous."

A multipurpose cadastre that can be established was mentioned. Although the cost of it would be nothing short of phenomenal, the aggregate savings to the American people would be far more phenomenal.

It was the mention of the multipurpose cadastre and the mention of the Office of Management and Budget's desire to have certain government programs be self supporting that caused many of the comments by private surveyors and mapmakers later that day at the various watering holes in the convention area.

Mr. Southard pointed out that "we must substantially broaden our view of ourselves. We are not just mapmakers or surveyors. We are gatherers of Earth science data. We are organizers of vast amounts of information and portrayers and interpreters, and we are scientific communicators in a very broad sense."

In closing he challenged the convention "to consider not just the issues of a technical nature that regularly occupy the agenda of these annual conventions. Consider the effectiveness of applications, not the elegance of processes."

The papers presented in the technical sessions covered effective applications often utilizing elegant processes. The papers described new equipment, new techniques, new applications and combinations thereof as well as unique methods of applying existing techniques and equipment to solve existing problems.

It was on the exhibit floor, however, that a major shift in technology was noted. This is the year of the analytical plotter. Numerous new or updated models were on

display. The reason for this apparently sudden change in emphasis is the rapidly increasing costs of producing complex mechanical-optical systems such as those used in conventional analog plotters. The rapid decrease in the cost of electronic hardware and software and the relatively less complex mechanical-optical systems used in analytical plotters has pushed them into the highly competitive world of map production. Many of them are complete with smart electronics and smart interfaces allowing them to be operated by personnel without extensive technical training.

New companies and old companies with new product lines were everywhere. Remote sensing, interactive graphics, electronic distance measuring, photography, digital plotters, and a myriad of other high technologies were represented in this virtual candy land of equipment.

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RADUATE SCHOOL TRAINING PROGRAM

Through merit selection procedures, the individual named below has been selected for the 1981-1982 Graduate School Training Program.

Usery, Eddy Lynn (MCMC)

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CONGRATULATIONS

Congratulations to Clifford J. Forbes (Photogrammetric photolab) for completing all the requirements for an Associate of Sciences degree through Central Texas College at Fort Leonard Wood. He completed all course work with highest honors while attending school evenings.

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safety

SHORT CUTS

Two major manufacturers in the auto industry took two identical cars, fitted them with special instruments, and sent each on an identical trip. One driver was told to make the best time he could, while the other was told to avoid risks and move as fast as the traffic flow permitted.

Results showed the first, or fast driver, passed 2,004 cars and was passed by only 13 vehicles. He used his brake a total of 1,339 times over the trip.

By contrast, the slow driver passed only 645 cars, but was overtaken by 142. His brakes were used only 652 times.

The slow car achieved almost the same average speed!

The fast driver arrived sooner, taking 20 hours and 12 minutes. The slow driver took 20 hours and 43 minutes, a difference of less than three percent.

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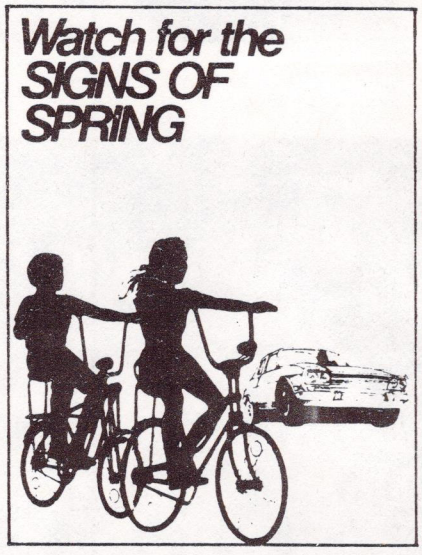

1980 USGS RETIREMENT RECEPTION

The USGS Social Committee held a retirement reception to honor the USGS retirees of 1980 on Saturday evening, February 7, the Lions Den, Lions Club Park.

About 150 people attended the reception to congratulate the retirees and say goodbye to some who intend to move from Rolla.

After the informal social hour, a brief statement was made by the Chairman of the social committee. MCMC Center Chief, Larry Borgerding then welcomed the employees, friends, and retirees and expressed his appreciation and the National Mapping Division's thanks for the many years of dedicated service given by the retirees of 1980. Mr. Borgerding introduced Mr. A. C. McCutchen, former Mapping Center Chief, who welcomed the new retirees into the ranks of the Federal retiree organization.

A reception line for the retirees was formed, after which a buffet supper was served consisting of finger-sandwiches, dips with raw vegetables, chips, punch, and coffee.

May I express my congratulations to the retirees and my thanks to the members of the 1980 USGS Social Committee and the volunteers who helped during this social function.

R. D. Yenzer, Chairman
1980 USGS Social Committee

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1981 USGS SOCIAL COMMITTEE

The following were selected to serve as members of the 1981 Social Committee:

Chairperson - C. Willeford, Br. of PH
Vice Chairperson - A. Kohrmann, Br. of FS
Members - D. Coleman, Br. of PH
- R. Ahland, Br. of CT
- S. Von Klemen, Br. of CT
- B. Wessner, Admin. Div. (GSO, MCSPO), Cons. Div., WRD

The Social Committee plans and carries out various functions through out the year for MCMC personnel, families, retirees, and guests.

Your cooperation with the committee, and any suggestions as to helpful improvements are appreciated.

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ATTENTION
ANNUAL SPRING OUTING
FRIDAY, JUNE 5, 1981
LIONS CLUB PARK
PAVILLION #3, 4 P.M. - ?

TICKETS - ADULTS - $2
KIDS (12 & UNDER) - $1
BEER (PER FAMILY) - $2

MENU - HOT DOGS
POTATO SALAD
BAKED BEANS
COLE SLAW
SODA

THE SOCIAL COMMITTEE WOULD LIKE TO ISSUE A SPECIAL INVITATION TO ALL RETIREES AND THEIR FAMILIES TO MAKE THIS A REUNION EVENT. COME AND JOIN THE OTHER RETIREES AND YOUR FORMER CO-WORKERS FOR AN EVENING OF FUN.

CONTACT YOUR SOCIAL COMMITTEE.

BE SURE AND WATCH THE TOPO SPEAKING FOR OTHER UPCOMING SOCIAL EVENTS.

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Dear Friends,

First, thanks to the Branch of Photogrammetry for the group luncheon for the retirees. My gratitude, also for the coffee in my honor on my last day of service. They were both great. It was indeed a pleasure to receive the beautiful scroll, plumb bob, and generous monetary gift. They will be ready reminders of all the pleasant relationships that I have enjoyed over the years with the many high caliber dedicated people at the Survey. It's been real!

Sincerely,

Stan Brady

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Dear Friends at the USGS

I wish to thank everyone at the USGS for the scroll, plumb bob, and check.

The plumb bob sits on the fireplace mantel, have not decided yet what to do with the money.

Again, many thanks.

Sincerely,

Walter Mutka.

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IN MEMORIAM

Meryl Cannell, mother of George Cannell.

Ralph A. Chaney, father of Ralph Chaney.

Beulah Jones, wife of Edward D. Jones.

Louis Turner, father of Jack D. Turner.

Gerald FitzGerald

George D. Whitmore

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PERSONNEL ACTIONS (through March 20)

Accessions

William Conover III, C, GS-7, Off. of the Ch., Carto. Trainee Group, car-cond. appt.

Susan L. Seibel, C. GS-5, Off. of the Ch., Carto. Trainee Group, car-cond. appt.

Anna L. Seibert, Carto. Aid, GS-4, Br. of Carto., Carto. Sect., Comp. Unit, pay adj. to full-time

Losses

Homer G. Crowell, Supv. Carto. Tech., GS-11, opt. retirement

Promotion

Sharron K. Cook, Clerk-Typist, GS-3, Br. of P&P, NCIC-M, Off. of the Chief, to Secretary, GS-5, Off. of the Chief

N. Merle G. McFarland, Secretary (Typing), GS-5, Br. of P&P, Off. of the Br. Chief, to same, GS-6, same

Mary A. Miller, Comp. Asst., GS-5, Br. of P&P, Off. of the Br. Chief, to same, GS-6, same

Claudia K. Sanders - Same as above

Everett A. Campbell, Comp. Operator, GS-8, Br. of P&P, Off. of the Br. Chief, to same, GS-9, same

Myron T. Dake, Carto. Aid, GS-4, Br. of Photogr., Tech. Plan. Sect., Base Sheet Prep. Group, to Carto. Tech, GS-5, same

Kenneth J. Boyko, C, GS-9, Off. of the Ch., Carto. Trainee Group, to same, GS-11, Br. of Photogr., Photogr. Oper. Sect.

David K. Tennant, Surv. Aid, GS-3, Br. of FS, Field Dist., to Surv. Tech., GS-4, same

David L. Schneider, CT, GS-9, Br. of P&P, NCIC-M, User Services Team, to same, GS-11, Br. of FS, Geod. Sect.

Margaret R. Persing, CT, GS-5, Br. of Carto., Carto. Sect., Comp. Unit, to same, GS-6, same

Ronald W. Harris, CT, GS-7, Br. of Carto., Carto. Sect., Comp. Unit, to same, GS-9, same

Samuel T. Ikeda, CT, GS-6, Br. of Carto., Carto. Sect., Comp. Unit, to same, GS-7, same

Kenneth G. Bruner, Photogr. (Lab), GS-5, Br. of Carto., Photoimagery Sect., to same, GS-6, same
James T. Felkerson, C, GS-7, Off. of the Chief, Carto. Trainee Group, to same GS-9, same
William M. Harris - same as above
Murray L. Rose, Electronics Engr., GS-5, Off. of the Chief, Instr. Maint. Unit, to same, GS-7, Off. of the Chief, Technology Office

Reassignment
Bruce A. Bauch, C, GS-11, Br. of P&P, Program Control Section
James L. Flaherty, Supv. Cartographer, GS-11, Br. of P&P, Off. of the Br. Chief, Computer Operations Unit
Linda K. McKeage, Carto. Aid (Typing), GS-3, Br. of P&P, NCIC-M, User Services Team, to Carto. Aid (Trainee), same, Br. of Photogr., Photogr. Oper. Sect.
Donald R. Pittillo, CT, GS-9, Br. of Carto., Prep. Sect., to same, same, Br. of Carto., Carto. Sect., Editing Unit
Homer W. Briggeman, CT, GS-11, Br. of Photogr., Photogr. Oper. Sect., to C, same, Off. of the Chief, Carto. Trainee Group
Jerry D. French, same as above
Norman E. Ragan, same as above
Everette E. Reppond, CT, GS-11, Br. of Photogr., Tech. Plan. Sect., Photogr. Contracts & Review Unit, to C, same, Off. of the Chief, Carto. Trainee Group
Jack D. Turner, CT, GS-11, Br. of Carto., Carto. Sect., Editing Unit, to C, GS-11, Off. of the Chief, Carto. Trainee Group
Laurence H. Lambert, SC, GS-13, Br. of FS, Field Dist., to same, same, Br. of P&P, Program Control Section
Claude R. Summers, Jr., CT, GS-9, Br. of P&P, NCIC-M, Data Acq. Team, to same, same, Br. of P&P, NCIC-M, User Services Team
Jack A. McFarland, CT, GS-11, Br. of Photogr., Photogr. Oper. Sect., to same, same, Br. of Photogr., Tech. Plan. Sect., Photogr. Contracts & Review Unit
Gerald L. Eckert, CT, GS-9, Br. of Photogr., Photogr. Oper. Sect., to same, same, same (diff. pos.)

Detail (NTE 60 days)
Charles K. Holdaway, C, GS-11, Br. of Photogr., Photogr. Oper. Sect., to SC, GS-12, same
Kenneth J. Boyko - same as above
Jeffrey L. Goldberg, C, GS-11, Br. of Carto., Off. of the Br. Chief, Digital Line Graphics Group, to SC, GS-12, Br. of Photogr., Photogr. Oper. Sect.
Robert M. Lemen, C, GS-11, Br. of Carto., Carto. Sect., Editing Unit, to SC, GS-12, Br. of Photogr., Photogr. Oper. Sect.
John A. Kelmelis, C, GS-11, Br. of Photogr., Photogr. Oper. Sect., to SC, GS-12, same
Gary W. McKeown - same as above
Robert A. Peckman - same as above
Jerry W. Wagner - same as above

Detail (NTE 120 days)
John E. Smith, SC, GS-12, Br. of Photogr., Tech. Plan. Sect., Photocontrol Requirements Unit, to same, same, Br. of Photogr., Photogr. Oper. Sect.
Dwayne M. Sawyer, SC, GS-12, Br. of Photogr., Photogr. Oper. Sect., to same, same, Br. of Photogr., Tech. Plan. Sect., Photocontrol Requirements Unit
Robert P. Rydeen, CT, GS-9, Br. of Photogr. Photogr. Oper. Sect., to same, GS-11, same, same
Jack C. May, CT, GS-9, Br. of Photogr., Photogr. Oper. Sect., to same, same, Br. of Photogr., Tech. Plan. Sect., Photocontrol Requirements Unit
Lee C. Malone, CT, GS-9, Br. of Photogr., Photogr. Oper. Sect., to same, same, Br. of Photogr., Tech. Plan. Sect., Photogr. Contracts & Review Unit
Edward A. Miloro, CT, GS-9, Br. of Photogr., Photogr. Oper. Sect., to same, same, same, (diff. pos.)

Change to lower grade
Carla S. Brookshire, Purch. Agt., GS-5, Br. of P&P, Program Control Section, to Carto. Aid (Trainee), GS-4, Br. of Photogr., Photogr. Oper. Sect.

AWARDS

SPECIAL ACHIEVEMENT
Stanley W. Kirkendall
Lee C. Malone

SUGGESTION
Russell Flegel

30-YEAR
Vernice D. Dewing
Fred W. Krueger

20-YEAR
Wayne E. Knouse

USGS EARLY BIRDS BOWLING NEWS

by Marshall Creighton

The third quarter of the 1980-81 season ended on February 12 with another close finish. The Rejects went into the last night with a slim 2 point lead over the Bozzoes who had worked themselves up from fifth to second place. The Rejects had come from sixth position and were really looking for a win to put themselves into the playoffs. These two proud teams were scheduled to play each other on the last night of the quarter. It was do or die for both. That evening the battle was joined. The Bozzoes struggled valiantly but only managed two points as the Rejects took the third quarter by five points.

The final standings for the third quarter are as follows:

	3rd Quarter	Season	Average
Rejects	35-14	82-65	757
Bozzoes	30-19	66-81	750
Dirty Digits	28-21	90-57	765
Strikers	28-21	84-63	755
Hits & Mrs	23-26	67-80	751
Gutter Gropers	19-30	57-90	748
Preparation H	17-32	66-81	750
Okies	16-33	73-74	754

Individual Award Leaders as of March 5:

	Men	
High Average	D. Sawyer	167
High Series Scratch	D. Bolin	570
High Game Scratch	P. Hensley	233
High Series Handicap	K. Eissinger	691
High Game Handicap	J. Meyer	255
	Women	
High Average	R. Grimm	131
High Series Scratch	S. Seibel	445
High Game Scratch	P. Malam	187
High Series Handicap	D. Kelly	639
High Game Handicap	P. Borgerding	248

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GOLF NEWS

by Gary Raymond

1981 USGS GOLF COMMITTEE

George Cannell, Gary Raymond, Al Niles, and Bruce Bauch

The 1980 USGS Golf League is being organized as we go to press. We will be playing at Oak Meadow Country Club this season and the season will start on May 18. Sixty-six people have signed up so we will have 11 teams competing. Each team is divided into two subteams, with each subteam battling an opposing subteam for the points awarded to the winner of medal play (least strokes) and match play (most holes won). Two points are also awarded to the medal play and match play winners when the two subteam's results are combined. The season will be divided into two halves and the winners of each half will play for the league championships.

The following individuals were selected as drafting captains:

Stan Kirkendall	Robert Graber
Joe Wallis	Eldon Finley
Ed Sands	Dwayne Sawyer
Hal Ogletree	Dan Canfield
John Conroy	Jack Turner
Homer Crowell	

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